

## ABSTRACT

An enhanced mechanism for the reverse link power control in a wireless communication system, especially for high speed data applications and fixed wireless communication applications, dynamically adjusts the power control step size of the reverse link power control. The power control step size is dynamically adjusted based on various factors including types of service, number of reverse supplemental code channels, total received power at the base station, estimated diversity gain and required mobility, among others. The system which includes stationary infrastructure, can query a subscriber unit's capability in the support of a pre-defined set of power control step sizes before assigning it to the subscriber unit. Furthermore, the subscriber unit may decide its optimized power control step size based on certain feedbacks from the system. In a specific embodiment, enhancement to the ANSI EIA/TIA-95 system is provided such that it supports a variable subscriber unit power control step size and associated signaling in accord with this invention.